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ABSTRACT

This first report in the Michigan Educational Assessment Program (MEAP) 1973-74 series presents the objectives of the program and indicates in detail some specific procedural questions relevant to this year's assessment. A revolutionary change in this year's program is the switch from normative tests to objective-referenced tests in reading and mathematics. The present tests measure 23 performance objectives in reading and 35 performance objectives in mathematics at the fourth grade level. The seventh grade tests measure 23 reading and 45 mathematics objectives. Appendix A contains a list of the objectives which are measured by the tests. Procedural questions, primarily relating to program changes, deal with topics such as measures used in the program, word relationships tests, how tests will be administered and shipped, what students are to be tested, which results will be reported, the status of the student attitude test, and so forth. A list of selected program publications is appended. (RC)

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Objectives and Procedures

1973-74

Michigan Educational Assessment Program

First Report

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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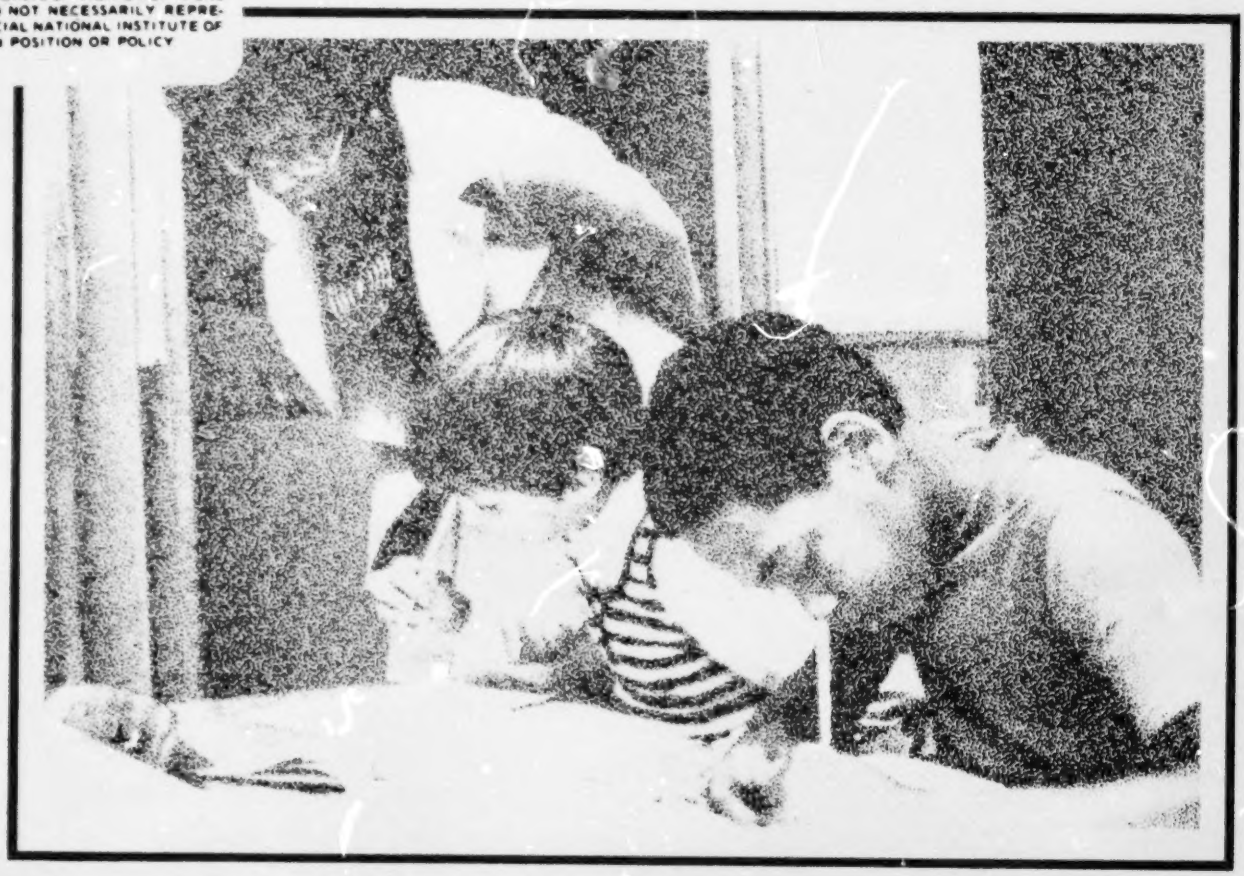

TM005 178

Michigan Department of Education

OBJECTIVES AND PROCEDURES

The First Report of the 1973-74 Michigan
Educational Assessment Program

Prepared by Research, Evaluation and Assessment Services

Michigan Department of Education

August, 1973

FOREWORD

The Michigan Educational Assessment Program (MEAP) was initiated by the State Board of Education, supported by the Governor, and funded by the legislature initially through enactment of Act 307 of the Public Acts of 1969, and subsequently under Act 38 of the Public Acts of 1970.

This report is the first in the 1973-74 series. It presents the objectives of the assessment program and indicates in detail some specific procedural questions relevant to the current year. At the end of the report is a list of selected program publications which are available in single copies upon request.

The State Board of Education has adopted a six-step educational management system as a guide for improving Michigan education. The six steps are: the identification of common goals, the development of performance objectives, the assessment of educational needs, the analysis of delivery systems, the evaluation and testing of these systems or programs, and recommendations for educational improvement. This report presents information for the third step--the assessment of educational needs. Though its major purpose is to provide information for state decision-makers, educational assessment also provides general information on student and system needs which, along with other information gathered by local educators, will assist them in identifying the needs of local schools and pupils.

Thanks are due to a large number of individuals and groups for making the Michigan Educational Assessment Program a reality and for continuing to work with it in its fifth year, 1973-74: to the State Board of Education for initially proposing it and continuing to support it, to the Governor and legislature for actively supporting it, and to Michigan educators for assisting with it. The program was designed and administered by the Research, Evaluation, and Assessment Services Unit, Michigan Department of Education, with the assistance of Measurement Research Center, Westinghouse Learning Corporation of Iowa City, Iowa, and the advice of the MEAP Advisory Council.

This report was prepared by Dr. Thomas H. Fisher and Dr. Edward D. Roeber with the assistance of Dr. David L. Donovan, Mr. Robert J. Huyser, Dr. Daniel E. Schooley, and Mrs. June Olsen. Questions or requests for additional information relative to this report should be directed to the educational assessment staff.

John W. Porter
Superintendent
Public Instruction

INTRODUCTION

For the last few years, the State Board of Education has encouraged Michigan education to move toward greater accountability in its operations and programs. The Board has adopted a six-step accountability model consisting of: (1) The Identification of Common Goals, (2) The Development of Performance Objectives, (3) Assessment of Needs, (4) Analysis of Delivery Systems, (5) Evaluation, and (6) Recommendations of Improvement. These six steps were described in detail in the 1971 72 edition of Objectives and Procedures and will not be repeated here.

The Michigan Educational Assessment Program (MEAP) since January, 1970, has provided information for the implementation of the third step of the accountability model -- Assessment of Needs. The Program has collected, analyzed, and disseminated information on district and school resources, student background, school and student academic performance, and school and district size. These data have been useful in describing certain aspects of Michigan education and have been used by decision-makers at both local district and state levels.

The educational assessment program has been evolving, and its operations have changed over the past four years to provide accurate and timely data to state and local educators and citizens. Thus, some variables have been redefined or dropped, and new variables have been added as attempts were made to understand the factors affecting education.

The achievement variables have been altered occasionally to update their content, modify test items, or otherwise improve the design. The school year 1973-74, however, will see a revolutionary alteration in the assessment tests as the program changes from the use of normative tests to objective-referenced

tests in reading and mathematics. The development and adoption of these tests is directly related to the State Board of Education's accountability model.

The Development of Performance Objectives

As has been indicated, the accountability model begins with a clear statement of educational goals. These goals can be found in The Common Goals of Michigan Education which was published in 1971.

Each goal area must be further defined, however, to permit measuring the extent to which they are successfully attained. This "definition" stage identifies certain indicators directly related to a specific goal area and for which accurate data may be collected. In the case of the basic skills goal area, greater definition is achieved by specifying learner performance objectives.

To accomplish specification of these objectives, Grade Level Commissions were established in November, 1971. These Commissions were composed of teachers, curriculum specialists, school administrators, and citizens who were nomiated for membership by various professional and civic organizations. These groups were given the responsibility of reviewing performance objectives then being developed by various referent groups in eight basic skill areas. In the past year and a half, the referent groups have developed draft objectives in music, art, communication skills (including foreign language), social studies, mathematics, physical education, health, and science.

At this time, the Commissions have reviewed all of the draft objectives available. The State Board of Education has given its final approval to four sets of objectives: science, mathematics, K-6 reading, and pre-primary.

The Development of Objective-Referenced Tests

Along with the effort to develop performance objectives in the basic skills areas, the State Board and the Superintendent of Public Instruction directed staff to develop objective-referenced tests for use in the educational assessment program. These tests were developed to measure some of the performance objectives in reading and mathematics, were successfully piloted during the 1972-73 school year in five Michigan school districts and will be used in the 1973-74 program.

During the first four years of the assessment program, the achievement tests used were normative, survey tests. They were designed to rank students from highest to lowest in a broad subject area such as reading. The tests were "power" tests in which all children were not expected to complete the test nor to obtain high scores within the alloted time interval.

The results of the normative tests were reported in terms of percentiles so that a particular student might be recognized as attaining a score higher than perhaps 50% of his peers. While this type of data is useful in certain instances and can quite readily identify students who have relative "need," the results do not give specific information about what the student can or cannot do. The teacher thus has little information upon which to plan instructional activities.

The new objective-referenced tests, however, are designed to reveal specific skills that students have or have not attained. This is done by constructing brief tests each of which reliably measure a single learner performance objective.

In the case of the assessment program for 1973-74, it was decided to develop such tests in the areas of reading and mathematics first. The present tests measure 23 performance objectives in reading and 35 performance

objectives in mathematics at the fourth grade level. The seventh grade tests measure 23 reading and 45 mathematics objectives.

Because greater specificity of results is desired from objective-referenced tests as compared to normative, survey tests the test instruments tend to be longer. Additionally, since it is desirable to determine whether or not each student indeed has attained selected specific skills, the tests are untimed.

The reading and mathematics objectives approved by the State Board of Education are not meant to cover every aspect of instruction in these skill areas. They are minimal skill objectives -- ones for which it is desirable to have all students attain. Naturally, a local district may wish to supplement these objectives with others which it considers important.

The 1973-74 assessment tests do not measure all of the minimal skills reading and mathematics objectives which have been developed. It was not possible to measure all of them given the limitations of available testing time, manpower, and money. APPENDIX A contains a list of the objectives which are measured by the tests.

Expansion of the Assessment Program

As has been stated, the Michigan Educational Assessment Program is an evolving program which ultimately hopes to provide information relative to all of the common goals. It is anticipated that the future years will continue to see changes in the resource input variables collected and reported by the program as changes occur in the needs of decision-makers for data. Attempts may be made in future years to collect process-type information which heretofore has not been economically possible.

It is anticipated that the Department of Education will continue developing objective-referenced test instruments. The procedure for constructing these

tests will be patterned along the following lines:

(1) analyze the Common Goals of Michigan Education,

(2) adopt performance objectives in the priority skill areas,

(3) select Michigan school districts to develop test items that are directly linked to performance objectives,

(4) select a major testing company to act as a technical consultant for the school districts and Department of Education personnel and to provide scoring and analysis services,

(5) validate the objective-referenced items in Michigan school districts, and

(6) produce objective-referenced instruments which will be used in the future educational assessment program.

The Department does not anticipate developing objective-referenced assessment measures in all of the remaining skill areas at one time because of limited resources. Nor does it expect to necessarily measure identical objectives in the same basic skill area each year.

Instead, the Department anticipates developing a comprehensive long-range plan which will determine the future expansion and direction of the assessment program. This plan will project the expansion of the program to other grade levels, other subject areas, and the possible renewal cycles of the present reading and mathematics assessments. Of course, this long-range plan may be expected to mesh with current Department expansion commitments such as the 1973-74 developmental program for the first grade assessment.

SECTION I

OBJECTIVES OF THE 1973-74 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

The major purpose of the Michigan Educational Assessment Program is to provide information to citizens and educators with which they can make educational decisions. The underlying assumption of the program is that informed people make better decisions. Within this broad purpose are imbedded three specific objectives which are discussed in this section.

Objective One

The first objective of the MEAP is to provide the State Board of Education, the Executive Office, the Legislature, and citizens with data describing the levels of basic skills educational attainment and other relevant descriptive data about each of Michigan's schools and school districts.

As has been stated, the state's citizens are often placed in a position of having to make decisions regarding education. Such decisions will vary, of course, depending upon whether one is a typical citizen deciding upon a local school millage issue or a state legislator deciding upon an important school financing law. In either case, people make better decisions with information than without it, and the MEAP can provide some of this information.

The assessment program collects, analyzes, and reports descriptive data about each school district on some twenty-two variables. These data are reported in several ways. In the case of the resource measures, percent racial ethnic minority, and size, a score is reported for each -- for example, percent of teachers with master's degrees or K-12 instructional expense per pupil (in dollars). These scores are also reported in terms of their position on various

percentile distributions of Michigan school districts.[1] In the case of the achievement data in reading and mathematics, special reporting techniques have been developed which are unique to the nature of objective-referenced tests. Essentially, these reports show the numbers of students who have attained the various minimal performance objectives.

Objective Two

The second objective of the MEAP is to provide local educators with specific information about the levels of basic skills educational attainment of students and of other relevant descriptive data for their own schools and school districts.

While the provision of data to local educators has always been a feature of the assessment program, the 1973-74 MEAP will begin an effort to concentrate on this dimension. It is felt that if education is going to continue to improve in the state it will do so more effectively when the individual classroom teacher is considerably involved in the process and has detailed information on student achievement available. Armed with this information, the teacher can plan proper instructional activities for the students who need them.

The 1973-74 MEAP will provide these needed data for the classroom teacher by its use of the objective-referenced tests and by reporting data on both an individual and a classroom basis. Hence, for each of the objectives measured, the teacher will have detailed analyses of how each pupil performed on each test question and which objectives he or she has attained. These data will be summarized for the whole classroom to provide an overall picture of the educational skill levels of the total group.

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[1] This also applies to the reporting of the Word Relationships test which is a required part of the 1973-74 assessment program.

Additionally, similar summary data (plus the resource and other descriptive variables) will be aggregated and reported for the school building and the school district. When combined with knowledge about performance levels of the state as a whole on the achievement measures and percentile norms for the other descriptive data, local administrators will have a powerful tool at hand for understanding their district better. Specific areas of need can easily be identified within the parameters of the included performance objectives, and appropriate actions can be planned.

Since student achievement information will be reported on an individual basis, local educators will be presented with a unique opportunity to involve students and parents in the educational program by sharing results of the tests with them. Thus, students and parents can be encouraged to join with teachers to plan programs to meet individual needs.

It should be understood that the release of student data to the individual and his parents is the proper role of local school officials. The Michigan Department of Education prefers that school data also be released publicly and interpreted by local educators if at all possible.

Objective Three

The third objective of the Michigan Educational Assessment Program is to provide information regarding the progress of the Michigan educational system as a whole and the progress of its school districts and schools over a period of years to the State Board of Education, the Executive Office, the Legislature, and citizens.

Prior to the initiation of the assessment program, there was little or no information on achievement levels of students across the state's various school districts. It was not possible to trace longitudinal progress -- or lack of it -- in the state's educational level. Thus, one could not follow changing trends

in the equalization of educational programs and student performance.

The advent of the MEAP has made such analyses possible. Even though the tests for the first four years of the program were somewhat different in content, certain measurement techniques have made it possible to trace educational progress from 1970 through 1973.

The change to objective-referenced tests will create a break in the continuity of longitudinal analyses since normative tests and objective-referenced tests are different types of tests. However, by maintaining continuity of performance objectives while providing for renewal of the test items such progress data will again be available in forthcoming years.

SECTION II

PROCEDURAL ASPECTS OF THE 1973-74 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

This section presents several questions and answers that will describe the procedural aspects of the 1973-74 educational assessment program. These questions deal primarily with changes in this coming year's program.

1. What types of measures will be used in the 1973-74 educational assessment program?

Seven major categories of measures will be used in the 1973-74 program: (A) Human Resources; (B) District Financial Resources; (C) Percent Minority, (D) Dropout Rate; (E) Student Achievement; (F) Size Measures; and (G) Attitudes (optional). A tentative list of the 1973-74 educational assessment measures is presented in Table 1.

2. What achievement measures will be used in the 1973-74 program?

The 1973-74 program provides for measures of (1) word relationships, (2) mathematics, and (3) reading. In contrast to past educational assessment programs, the mathematics and reading instruments are objective-referenced tests. Each test contains items that measure a set of minimal performance objectives. The minimal performance objectives in mathematics and reading were selected from those developed by commissions made up of teachers, administrators, curriculum specialists and lay citizens in cooperation with the Department of Education and recently adopted by the State Board of Education. They represent the set of minimal expectancies applicable to all fourth and seventh grade students in the state.

In 1972, a project was begun to write and validate test items to measure the minimal mathematics and reading objectives. Under the direction of the

TABLE I

A LIST OF THE TWENTY-TWO MEASURES REPORTED

AT THE DISTRICT, SCHOOL, OR CLASSROOM LEVELS

MEASURES	DISTRICT	SCHOOL	CLASSROOM
A. Human Resources			
(1) Professional Instructional Staff per 1,000 Pupils	X	X	
(2) Teachers per 1,000 Pupils	X	X	
(3) Average Years Teaching Experience	X	X	
(4) Percent of Teachers with Master's Degree or Above	X	X	
(5) Average Contracted Salary per Teacher	X	X	
B. District Financial Resources			
(6) State Equalized Valuation per Resident Member (1971-72)	X		
(7) Local Revenue per Pupil (1971-72)	X		
(8) State School Aid per Pupil (1971-72)	X		
(9) K-12 Instructional Expense per Pupil (1971-72)	X		
(10) Elementary Instructional Expense per Pupil (1971-72)	X		
(11) Total Current Operating Expense per Pupil (1971-72)	X		
(12) Total Operating Millage (1971-72)	X		
C. Percent Minority			
(13) Percent of Racial-Ethnic Minority Students	X	X	
D. Dropout Rate			
(14) School Dropout Rate (1971-72)	X		
E. Student Achievement (Provided separately for grades 4 and 7)			
(15) Word Relationships	X	X	X
(16) Reading	X	X	X
(17) Mathematics	X	X	X
F. Size Measures			
(18) Grade 4 Membership	X	X	
(19) Grade 7 Membership	X	X	
(20) Total Membership	X	X	
G. Attitudes (Optional)			
(21) Attitude toward Self	X	X	X
(22) Attitude toward School	X	X	X

NOTE: Undated measures are based on 1972-73 data.

Michigan Department of Education, four school districts (Alma, St. Louis, Jackson, Pontiac, and Waterford in cooperation with the Michigan Council of Teachers of Mathematics) wrote the items. The test items were edited by the Department and a technical support contractor, California Test Bureau/ McGraw-Hill. The items were tried out in the four districts, as well as in the Detroit Public Schools. The items were revised based both on teachers comments and reviews by subject-matter specialists. The final instruments were produced by the technical support contractor following specifications approved by the Department.

The content of the mathematics and reading tests is considerably different from their counterparts of previous years. The content of the three tests is indicated below:

Mathematics

The fourth grade mathematics test provides measures of thirty-five minimal performance objectives. The seventh grade test contains measures of forty-five objectives. There are five multiple-choice test items for each objective in both tests. Each test also includes several items that are to be read to the student by the test administrator. The minimal performance objectives selected for the 1973-74 program are provided in APPENDIX A: it should be noted that these performance objectives represent only some of those given in the total set of minimal mathematics performance objectives.

Reading

Both the fourth and seventh grade reading tests contain measures of twenty-three minimal performance objectives. As with the mathematics test, there are five test items that measure each objective at both grades. The fourth grade test contains several items that are to be read to students by the test administrator. The minimal performance objectives at grades 4 and 7 selected for use

in the 1973-74 program are listed in APPENDIX A. This list contains most but not all of the entire set of reading performance objectives adopted by the State Board of Education.

Word Relationships

The word relationships portion of the educational assessment battery measures knowledge of the meanings of words and understanding of relationships among words and concepts. This is accomplished through use of verbal analogy items. While test experts agree that verbal analogy items yield a measure that reflects both ability and achievement, they are divided as to the balance between these two components. The word relationships score is not considered to be very sensitive to instruction in the short run and may be considered for purposes of this program as a test of developed verbal ability. The word relationships instruments are identical to the corresponding instruments used in the 1972-73 program.

3. When will the educational assessment instruments be administered?

Because the fourth and seventh grade reading and mathematics tests measure minimal performance objectives which all students should attain by the end of third and sixth grades, it is important that the date of testing be moved to early fall. This will provide local educators time to use the results of the tests to correct specific educational needs of students when the results are returned.

The time between September 24th and October 5th (two weeks) has been designated for administering the educational assessment instruments. In addition, the time between October 8 and October 12 (one week) has been set aside for make-up testing.

While few limitations are imposed on the scheduling of the battery within the designated period, two considerations should be borne in mind.

First, by scheduling the battery early in the two-week period, more time will be left to hold a make-up session for students. Second, it is generally believed that pupil performance on achievement batteries is adversely affected by such things as "Monday morning stupor" and "Friday afternoon itch." To the extent that these conditions can be predicted, it seems wise to schedule the battery to avoid them. Each district will need to review its own calendar to determine the best time for its own pupils. Districts with irresolvable time conflicts should notify staff of the educational assessment program, Department of Education (Telephone: 517--373-1830).

4. How will quantities of assessment materials needed and shipping methods be determined?

Each local district superintendent has been asked to: (a) designate or redesignate a local district coordinator, (b) furnish a correct address to be used for shipment of materials; and (c) indicate the numbers of fourth and seventh grade pupils in each school.

5. When will the assessment materials be mailed and to whom? To whom should they be returned?

In all K-12 districts, the assessment battery and necessary materials will be shipped on or about August 15, by Measurement Research Center (MRC) to the local district coordinator who has been designated by the school superintendent.

In non-K-12 districts, the materials will be sent by Measurement Research Center to the intermediate district coordinator who will perform the functions of the local district coordinator for the non-K-12 districts in the intermediate district.

A school coordinator for each school within the district will need to be appointed by each local district coordinator. The school coordinator is responsible for all materials supplied to him by the local district coordinator.

After the administration, the assessment booklets and answer sheets, both used and unused, are to be returned to the local district or intermediate district coordinator from whom they were secured. That coordinator will be responsible for all materials supplied to him, and for returning to MRC those materials indicated in the instructions to the district coordinators.

6. Who will conduct the 1973-74 educational assessment program?

The 1973-74 program will be conducted by the Research, Evaluation, and Assessment Service, Michigan Department of Education with the assistance of Westinghouse Learning Corporation/Measurement Research Center, Iowa City, Iowa. The MEAP Advisory Council and the Council on Elementary and Secondary Education continue to provide informal advice about the program as do educators in informal ad hoc groups and regional meetings. The State Board of Education provides policy directions.

7. Will all Michigan districts be included in the 1973-74 program?

All public school districts with pupils in grades four and/or seven will be included in the 1973-74 program.

8. Which fourth and seventh graders will -- and will not -- be given the 1973-74 educational assessment instruments?

Most fourth and seventh graders will take the assessment battery. The following are guidelines to determine the students to be tested and those not to be tested:

Students to be Tested

All students, currently enrolled in the fourth grade or seventh grade and receiving regular classroom instruction in reading and mathematics are to be tested. Included in this group are students who receive itinerant services (for example, hard of hearing, physically handicapped, educable mentally retarded, emotionally disturbed, those with speech impediments) as well as

regular instruction, are also to be tested. Handicapped students who are in special classes for the handicapped should be tested if the testing can be completed without verifiable physical or mental strain to such students.

Students in nongraded programs who can be identified as fourth or seventh graders should be tested. Students whose grade level cannot be determined should be included if they are in their fourth or seventh year beyond kindergarten.

Pupils who attend public schools on a shared time basis from nonpublic schools should take the assessment battery if they are in the public schools for instruction in reading and mathematics. If instruction in only one of these areas is provided by public schools, the student may, at the option of the local district, (1) take only those aspects of the battery for which he receives public school instruction, (2) be given the entire battery, or (3) be excluded from taking any of the tests.

Students Not to be Tested

All students who are confirmed Type A mentally handicapped are not to be tested, unless such students participate in regular classroom programs in reading and mathematics and can be tested without verifiable physical or mental strain. Other handicapped students who receive instruction in reading and mathematics only in special classes may be excluded from testing at the discretion of the local district.

9. How long will it take to administer the educational assessment instruments?

The timing of the objective-referenced tests is different than past educational assessment tests in that they are untimed. Generally, students will be able to complete all three achievement instruments (word relationships, mathematics, and reading) in from two to five hours. Experience has shown that over ninety

percent can complete the tests in that amount of time. Only word relationships is a timed test, however. The mathematics and reading tests are untimed, allowing all students time to complete both tests at their own pace. The untimed nature of the mathematics and reading tests will allow testing periods to be scheduled to fit class periods, particularly at seventh grade. The time needed to complete the test by all students depends on how quickly they work, as well as time needed for questions, directions, and so forth. More detailed information will be included in the Assessment Administration Manual which will be provided with the assessment materials to be received by the first week of September.

10. What steps are being taken to assure some degree of statewide standardization in administration?

The superintendent in each K-12 district has been asked to designate a local district coordinator. It will be the responsibility of local district coordinators to: (a) receive the materials; (b) distribute them to buildings; (c) train the test administrators; (d) collect the used and unused materials (both the answer sheets and the booklets); (e) destroy extra used and unused booklets and unused answer sheets; and (f) prepare for return to Measurement Research Center the used answer sheets, school coordinators reports, and local district coordinator reports requested in the Assessment Administration Manual. In addition, the coordinator will answer (or relay to the Department of Education) questions that arise in his district concerning the program, the materials, or their intended use. Finally, he will certify to the Department of Education the destruction of the designated materials.

In non-K-12 districts, the function of the local district coordinator will, in general, be performed by a coordinator designated by the intermediate district superintendent. An intermediate district coordinator has been appointed in each of the intermediate districts that serves one or more non-K-12

districts. Intermediate district coordinators serve in a capacity similar to that of a local district coordinator in the K-12 districts.

A coordinator is also to be appointed for each school. These school coordinators will report to the local or intermediate district coordinators.

Three manuals to assist these individuals concerned with the assessment program will accompany the materials: (a) the Local District and Intermediate District Coordinator's Manual; (b) the School Coordinator's Manual; and (c) the Assessment Administration Manual. The procedures outlined in these manuals attempt to ensure a statewide standardization in the administration of the assessment battery.

11. Who will administer the educational assessment battery?

It is the responsibility of the local district officials to arrange for facilities, allocate time, and determine the other administrative necessities involved in the administration of the assessment instrument. The educational assessment instrument will be administered by the classroom teacher in most typical fourth grade settings. In the seventh grade, the battery may be administered in classrooms by teachers or the tests may be administered by a principal or counselor to a large group assembled in a cafeteria, library or, if adequate lighting and work surface are available, in an auditorium. In some schools a public address system has been used effectively to provide directions to classroom groups working under the supervision of teachers.

The persons chosen to administer the battery will be selected by local school officials and notified well in advance of the administration date and will be supplied with the necessary materials and trained in their use. Detailed administration instructions will be included in the Assessment Administration Manual.

In 1972-73, assessment staff monitored the administration of the educational assessment battery in a sample of school districts. The reports indicated that

the administrations were carried out smoothly. In 1973-74 a sample of school districts will again be carefully monitored in order to assist district officials to maintain uniformity in administration. As in 1972-73, these monitors will be staff members of the Department of Education.

12. What is the status of the attitude test?

As was announced earlier by letter, the State Board of Education approved the inclusion of attitude instruments in the 1973-74 educational assessment program on an optional basis. In 1969-70 and again in 1970-71 the MEAP included attitude tests. In 1971 they were withdrawn for revision on the recommendation of staff because the early tests did not meet MEAP standards for reliability. A completely new and much larger pool of attitude items was developed, and based upon pretesting conducted in 1971-72, reliable group tests were developed measuring two attitudes: (1) attitude toward self and (2) attitude toward school.

These tests will be available at local district option without cost to the district. The only conditions are that they be given during the time period set aside for the administration of educational assessment tests, that they be returned for processing with other assessment answer materials, and they be administered to all fourth and/or seventh grade pupils.

Reports of attitude test results will be provided on the same schedule as the reports of other educational assessment results, and will consist of summary information at the class level and above. No individual results will be provided on these anonymous questionnaries. Item analysis data will also be provided for reporting groups that contain 100 or more pupils, and a statewide summary and item analysis will be provided to participating districts after all data have been processed.

At the time of this publication the deadline data for application to the Department to participate in the optional attitude testing has passed; no additional applications for the 1973-74 program will be accepted.

13. What results from the 1973-74 educational assessment program will be reported?

The results of the objective-referenced tests in mathematics and reading will be presented much differently than results of past mathematics and reading tests used in the Program. The following types of information will be reported for each student: (1) whether or not the student correctly answered each test item; (2) the number of items correctly answered for each objective; (3) and whether or not the student has attained each objective.

Information to be reported at the classroom, school and district level includes: (1) the percent of students answering 0, 1, 2, 3, 4, or 5 of the five items correctly for each objective; and (2) the percent of students who attained each objective. A listing of the students in each classroom who attained each objective will also be provided.

Results will be reported on the word relationships instrument in three ways for individual students: (1) a raw score, which indicates the number of items which the student answered correctly; (2) a standard score; and (3) a percent below score which indicates the percent of students that had a lower standard score. Summaries of this information, presented in a standard score distribution, will be provided at the classroom, school and district levels.

14. When will results from the 1973-74 educational assessment program be reported?

It is planned that data on individual students, classrooms, schools, and districts will be reported by mid-November, depending on receipt by Measurement Research Center of the completed answer sheets. The sooner answer sheets are returned, the sooner they can be processed and results returned to local districts. Reports regarding groups of districts, schools, and students will follow at a later time. Two booklets of explanatory materials will accompany the results. One is designed to help teachers interpret individual

student and classroom results. The other is designed to help administrators assist teachers in interpreting student and classroom results, as well as help in interpreting the school and district summaries of the results.

15. How -- and when -- will the Department's educational assessment staff assist local educators in interpreting and using the assessment results?

The educational assessment program staff assisted by an ad hoc committee of educators (chaired by Dr. Frank Womer of the University of Michigan), is developing some ways to help educators interpret and use the assessment results. To do this assessment staff is:

1. developing a brief general informational filmstrip, audio tape, and storycards to be distributed in mid-August to all K-12 and intermediate districts which can be used with all teachers to increase their general awareness of the assessment program;
2. scheduling several one and one-half hour briefings to be held across the state during the week of September 10, 1973, to discuss the new testing procedures with local educators;
3. scheduling several one-day sessions to be held across the state during the week of October 15, 1973, to train local test coordinators, administrators, and curriculum specialists in the interpretation and utilization of test results; and
4. developing for distribution in mid-October an in-depth training filmstrip, audio tape, and booklets as aids to teachers in the interpretation of the results.

Basically, it is hoped that all educators' understanding of the new program can be increased and that interpretive skills can be given to those teachers and administrators who will be working with the data.

APPENDIX A

MATHEMATICS OBJECTIVES
MEASURED IN THE 1973-74
MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM*
Grade 4

	Objective Number	
1.	AR-I-A-6	Given a set of objects, the learner will recognize objects that are the same size.
2.	AR-I-A-8	Given an object shaped like a circle, triangle, square, or rectangle, the learner will choose the shape the object represents.
3.	AR-I-A-16	Given a set of three containers, one full, one empty, and one half-filled, the learner will choose the containers that are arranged from full to empty.
4.	AR-I-A-24	Given a collection of five objects of varying lengths, the learner will identify the longest or the shortest, as requested.
5.	AR-I-A-39	Given five small toys in a line, the learner will identify the first toy and the last one.
6.	AR-I-B-7	Given a set with less than ten objects, the learner will identify an equivalent set.
7.	AR-I-B-32	Given a set of two to eight objects, the learner will identify a set having fewer members than the original set.
8.	AR-I-B-40	Given a line marked with congruent segments and a set of number cards (0-10), the learner will choose the appropriate number card for the point on the line.
9.	AR-I-B-43	Given any three numbers, 0-10, the learner will identify which number is the greatest and which is the least, on request.
10.	AR-I-B-44	Given two consecutive even or odd numbers, 0-9, the learner will name the number that comes between the two given numbers.
11.	AR-I-B-45	Given a number from 1 to 8, the learner will identify the number that comes before or after the given number.

* This list represents all of the objectives that will be assessed in the 1973-74 Program. Other important objectives not assessed are available in the Minimal Performance Objectives for Mathematics in Michigan, Michigan Department of Education, 1973. This version of these objectives was used in the development of the assessment measures. Because of the group - administered nature of these measures, minor wording changes were made in the objectives. Educators should refer to the complete set of objectives for the original wording of these objectives.

12. AR-I-64 Given a set of tens and ones representing a number less than 100, the learner will identify the numeral.

13. AR-I-B-65 Given a set of sequentially ordered whole numbers within a decade less than 100, such as 31, 32, ... 40, the learner will identify the number that comes immediately before or after a given number, as requested.

14. AR-I-B-67 Given 2 two-digit numbers, the learner will tell which number is greater and which number is less.

15. AR-I-B-70 Given a set of dimes and pennies valued between 11 and 99 cents (one dime, one penny to nine dimes, nine pennies), the learner will state the value.

16. AR-I-B-79 Given any three-digit number, the learner will write expanded notation to 1,000, first by using place value words and then by using numerals.

17. AR-I-B-81 Given a random list of two-and three-digit numbers, the learner will identify the list that is in ascending order.

18. AR-I-B-82 Given 2 three-digit numbers which have the same digits but in different positions, the learner will compare them to determine which is greater and which is less.

19. AR-I-B-84 Given a counting sequence of two or four numbers, the learner will write the next number in the sequence.

20. AR-I-B-85 Given the counting numbers 1-10, the learner will indicate those that are multiples of 2.

21. AR-I-B-86 Given a set of objects, the learner will select another set that will have twice as many objects.

22. AR-II-A-10 Given addition exercises involving a two-digit number plus a one-digit number requiring no regrouping (carrying), the learner will find the sums with or without the use of aids.

23. AR-II-B-6 Given a word problem read by the teacher, involving addition or subtraction combinations to 10, the learner will identify the operation and the sum or difference.

24. AR-II-B-9 Given a set of objects or pictures showing a subtraction relationship with combinations to 18, the learner will identify an appropriate number sentence.

25. AR-II-B-11 Given a subtraction word problem read by the teacher involving combinations to 18, the learner will: (1) identify the operation, (2) identify an appropriate number sentence, and (3) identify the answer.

26. AR-II-B-13 Given two sets of objects, one with more objects than the other, the learner will identify how many more members it has.

27. AR-II-B-15 Given a two-digit number, the learner will subtract one-digit numbers with no regrouping (borrowing) with or without the use of aids.

28. AR-II-B-16 Given a two-digit number, the learner will subtract a two-digit number with no regrouping (borrowing).

29. AR-III-D-1 Given groups of less than 13 objects and a statement (1/2 of ___, 1/4 of ___), the learner will identify the group that shows the appropriate fractional part of the whole.

30. M-I-A-5 Given rulers specially scaled in inches and half-inches, the learner will identify the measurement of objects to the nearest inch.

31. M-II-A-6 Given the reading "_____ o'clock" and a clock face, the learner will identify the clock showing the appropriate time.

32. M-II-B-3 Given three to five different amounts of money, all less than or equal to $5.00, the learner will identify the greatest or the least.

33. M-II-C-1 Given a Fahrenheit or Centigrade thermometer, the learner will identify the temperature (above zero) to the nearest degree.

34. G-I-A-2 Given pictures of various shapes, the learner will identify circles, triangles, squares, and rectangles as requested.

35. AL-1 Given a statement of equality involving addition or subtraction facts and a placeholder for the sum or difference, the learner will supply the sum or difference.

MATHEMATICS OBJECTIVES
MEASURED IN THE 1973-74
MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM
Grade 7

Objective Number		
1.	AR-I-B-87	Given any four-digit number, the learner will identify the number that is 100 or 1000 more or less than it is, without using formal addition or subtraction.
2.	AR-I-B-89	Given a number orally, the learner will identify the arabic numeral.
3.	AR-II-A-22	Given addition exercises involving a three-digit number plus a one-, two-, or three-digit addend, with or without regrouping (carrying), the learner will identify the sums, using any technique.
4.	AR-II-A-26	Given addition problems involving two or three addends with three, four, five, or six digits, with or without regrouping, the learner will find the sums, using any techniques.
5.	AR-II-B-20	Given a three-digit number, the learner will subtract a two- or three-digit number, with or without the use of aids.
6.	AR-II-C-6	Given a repeated addition sentence, the learner will represent it as a multiplication sentence with its product.
7.	AR-II-C-11	Given two numbers, the learner will demonstrate that the order in which they are multiplied does not change the product.
8.	AR-II-C-13	Given a one-digit number (10,20...), (100,200...), the learner will state the product.
9.	AR-II-C-15	Given a two-digit number to be multiplied by a one-digit number, the learner will identify the product, with or without aids.
10.	AR-II-D-5	Given a sentence with one single digit, a missing factor, and a product (whole numbers), the learner will identify the missing fact.

11. AR-II-D-7 Given a division fact, the learner will identify it rewritten as a multiplication fact.

12. AR-II-D-9 Given a one-digit divisor (factor) and a dividend (product) of less than 100, the learner will identify the quotient (missing factor) if there is no remainder.

13. AR-II-D-15 Given an exercise with a dividend of four digits or less, and a one-digit divisor, the learner will identify the quotient.

14. AR-III-A-1 Given several objects, some divided into congruent parts, some divided into noncongruent parts, the learner will identify congruent parts.

15. AR-III-A-18 Given a diagram divided into congruent parts, with some parts shaded, the learner will identify the shaded area by identifying an appropriate fraction.

16. AR-III-A-19 Given any five fractions with <u>like</u> denominators, in random order, the learner will identify them in order (halves, thirds, fourths, fifths, sixths, eights, tenths); with or without the use of aids.

17. AR-III-B-4 Given two common fractions with like denominators and a sum greater than 1, the learner will identify the sum, with or without the use of fractional cut-out parts.

18. AR-III-B-7 Given two mixed numbers with like denominators, the learner will write the sum.

19. AR-III-C-4 Given a mixed number and a fraction with like denominators of 2,3,4,6, or 8, where no regrouping is necessary, the learner will find the difference.

20. AR-III-C-6 Given a whole number and a common fraction with a denominator of 2, 3, 4, 6, or 8, the learner will find the difference with or without the use of fractional parts.

21. AR-III-D-4 Given two unit fractions with denominators less than seven, the learner will compute the product with or without the use of a model.

22. AR-IV-A-3 Given a model of a fraction illustrating hundredths, the learner will identify the decimal fraction as illustrated.

23. AR-IV-A-7 Given a decimal fraction of no more than three places, the learner will name the place value of each digit, without aids.

24. AR-IV-B-3 Given a verbal problem involving addition and subtraction of decimal numbers involving only tenths, the learner will find the answer.

25. AR-IV-B-6 Given a verbal problem involving addition and subtraction of decimal numbers involving tenths and hundredths, the learner will find the answer.

26. AR-IV-B-9 Given an addition and subtraction decimal problem in horizontal or vertical form with no more than five (5) digits and no more than three (3) decimal places, the learner will find the sum or difference.

27. AR-VI-15 Given a picture of sets paired in (A) a one-to-one, (B) a many-to-one, or (C) a one-to-many ratio and part of another pair, the learner will identify the pair that keeps the ratio equivalent.

28. M-I-A-10 Given rulers specially scaled in quarter inches or eighth inches, the learner will measure objects to the nearest quarter unit.

29. M-I-B-8 Given a polygon, the learner will estimate its area in square units.

30. M-I-C-7 Given a drawing of a rectangular solid divided into units (dimension less than or equal to 5 units), the learner will name the number of units in it.

31. M-II-A-10 Given a clock face with hands on it, the learner will choose the correct time notation.

32. M-II-A-11 The learner will use A.M. and P.M. notation in writing time.

33. M-II-B-7 Given two money values, the learner will add or subtract using dollars and cents notation.

34. M-II-B-8 Given two money values, the learner will choose the approximate sum or difference to the nearest dollar or ten cents.

35. M-II-B-9 Given verbal problems consisting of one or two operations involving money values less than or equal to $20, the learner will solve the problems.

36. M-II-C-3 Given a Fahrenheit or Centigrade thermometer the learner will identify temperatures to the nearest degree, using the degree [°] symbol.

37. G-I-A-4 Given a set of quadrilaterals, the learner will identify and name a parallelogram, a square, and a rectangle.

38. G-I-B-3 Given models of lines or line segments, some of which are parallel, intersecting, and perpendicular, the learner will identify and name each.

39. G-I-B-5 Given the description of a plane, and a part of a plane, the learner will identify surfaces which represent a plane or part of a plane.

40. AL-2 Given a statement of equality involving addition, subtraction, or multiplication facts and containing a placeholder or letter, the learner will identify the missing number.

41. AL-4 Given a pair of whole numbers or number phrases less than 1,000, the learner will identify the appropriate symbol of equality or inequality, $<$ or $=$ or $>$.

42. AL-5 Given an equation involving one or zero, the learner will complete the sentence.

43. AL-7 Given a numerical statement involving the distributive property and a placeholder, the learner will insert the missing value.

44. AL-10 Given a verbal exercise involving a number in a single operation the learner will write a related algebraic expression.

45. P-9 Given a coordinate system using whole numbers and/or letters and given 3 pairs of coordinates, the learner will locate the points.

READING OBJECTIVES
MEASURED IN THE 1973-74
MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM*
Grade 4

	Objective Number	
1.	2.1	Given a reading selection at the third grade level, the learner will match a series of words in the selection with appropriate definitions.
2.	2.2	Given a set of phrases, the student will indicate those phrases which have the same meaning.
3.	3.1	Given a reading selection at the third grade level, the learner will answer multiple choice questions with words and/or phrases extracted from that selection.
4.	3.2	Given a reading selection at the third grade level in which every fifth word has been replaced with a blank, the learner will choose the exact word appropriate to the blank space at 50% accuracy.
5.	4.1	Given a method of arranging data, the learner will identify the method (e.g., color, size, importance, time, etc.).
6.	4.4	Given a series of randomly placed words, the student will be able to alphabetize the words through the first three letters.
7.	5.1	Given a series of reading selections, the learner will indicate those which are factual.
8.	5.2	Given a series of reading selections, the learner will indicate those which are fictional.
9.	6.1-6.3	Given a reading selection, the learner will be able to identify the the author's purpose (e.g., persuasion, entertainment, propaganda, etc.).
10.	7.1	Given a reading selection at the third grade level, the learner will select from a list of possible titles the one most appropriate as the title for that selection.
11.	7.2	Given a reading selection at the third grade level, the learner will select from a series of still pictures the one picture most appropriate in depicting the main idea of the selection.
12.	7.3	Given a reading selection at the third grade level, the learner will select from a number of short summaries the one which best summarizes the selection.

*This list represents all of the reading objectives that will be assessed in the 1973-74 program. Other important objectives not covered in these tests are available in the list of Communication Skills Performance Objectives available from the Michigan Department of Education.

13. 8.4 Given a reading selection at the third grade level, the learner will match a series of direct quotations from the story with the character who is speaking.

14. 9.3 Given a reading selection at the third grade level, the learner will correctly answer a series of multiple choice questions relating to the sequence of events or ideas presented in the selection.

15. 10.2 Given three or more selections at the third grade level, the learner will choose the two most alike in the mood expressed.

16. 10.3 Given a reading selection at the third grade level, the learner will choose from a series of sentences that sentence which best describes how a given character feels in a story.

17. 10.6 Given a selection containing figurative language, the learner will identify the definition of that phrase.

18. 11.1 Given a reading selection at the third grade level, the learner will correctly match a series of causes with a corresponding series of effects.

19. 11.2 Given a reading selection at the third grade level with the conclusion of the story deleted, the learner will select from a series of possible conclusions the one most appropriate to the selection.

20. 13.1 Given a locational question, the learner will choose from a series of reference sources where that item will be found.

21. 13.2 Given a locational question about newspapers, the learner will select the section where he would find the answer.

22. 14.1-14.3 Given a reading selection at the third grade level, the learner will answer correctly a series of multiple choice questions relating to meanings, generalizations, or conclusions not expressed in the selection itself.

23. * Given a reading selection at the third grade level, the learner will correctly answer a series of multiple choice questions relating to motivation.

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*This objective was omitted from the reading performance objectives after the deadline established for test development.

READING OBJECTIVES
MEASURED IN THE 1973-74
MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM
Grade 7

	Objective Number	
1.	18.1	Given a reading selection at the sixth grade level, the learner will match a series of words in the selections with appropriate definitions.
2.	18.2	Given a set of phrases, the student will indicate those phrases which have the same meaning.
3.	19.1	Given a reading selection at the sixth grade level in which every fifth word has been replaced with a blank, the learner will choose the exact word appropriate to the blank space at 50% accuracy.
4.	19.2	Given a reading selection at the sixth grade level, the learner will answer multiple choice questions with words and/or phrases extracted from that selection.
5.	20.1	Given a method of arranging data, the learner will identify the method (e.g., color, size, importance, time, etc.).
6.	21.1	Given a series of randomly placed words, the student will be able to alphabetize the words through the first three letters.
7.	22.1	Given a series of reading selections, the learner will indicate those which are factual.
8.	22.2	Given a series of reading selections, the learner will indicate those which are fictional.
9.	23.1-23.3	Given a reading selection, the learner will be able to identify the author's purpose (e.g., persuasion, entertainment, propaganda, etc.).
10.	24.1	Given a reading selection at the sixth grade level, the learner will select from a list of possible titles the one most appropriate as the title for that selection.
11.	24.2	Given a reading selection at the sixth grade level, the learner will select from a series of still pictures the one picture most appropriate in depicting the main idea of the selection.

12. 24.3 Given a reading selection at the sixth grade level, the learner will select from a number of short summaries the one which best summarizes the selection.

13. 24.4 Given a series of three or more reading selections at the sixth grade level, the learner will choose the two most alike in the ideas expressed.

14. 25.3 Given a reading selection at the sixth grade level, the learner will match a series of direct quotations from the story with the character who is speaking.

15. 26.3 Given a reading selection at the sixth grade level, the learner will correctly answer a series of multiple choice questions relating to the sequence of events or ideas presented in the selection.

16. 27.2 Given a reading selection at the sixth grade level, the learner will choose from a series of sentences that sentence which best describes how a given character feels in a story.

17. 28.1 Given a reading selection at the sixth grade level, the learner will correctly answer a series of multiple choice questions relating to motivation.

18. 29.1 Given a reading selection at the sixth grade level, the learner will correctly match a series of causes with a corresponding series of effects.

19. 29.5 Given a reading selection at the sixth grade level, the learner will answer correctly a series of multiple choice questions relating to meanings, generalizations, or conclusions not expressed in the selection itself.

20. 30.2 Given three or more selections at the sixth grade level, the learner will choose the two most alike in the mood expressed.

21. 31.1 Given a locational question, the learner will choose from a series of reference sources where that item will be found.

22. 31.2 Given a locational question about newspapers, the learner will select the section where he would find the answer.

23. 32.1 Given a reading selection at the sixth grade level with the conclusion of the story deleted, the learner will select from a series of possible conclusions the one most appropriate to the selection.

APPENDIX B

Selected Program Publications

1970-71 Assessment Publications

Published Reports

Objectives and Procedures of the Michigan Educational Assessment Program 1970-71. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 7, 1970. (The first report of the 1970-71 Michigan Educational Assessment Program).

1970-71 Individual Pupil Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; April, 1971. (The second report of the 1970-71 Michigan Educational Assessment Program).

Local District and School Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; June, 1971. (The third report of the 1970-71 Michigan Educational Assessment Program).

Local District Results: Lansing, Michigan: Michigan Department of Education; December, 1971. (The fourth report of the 1970-71 Michigan Educational Assessment Program). (Out of Print).

Levels of Educational Performance and Related Factors in Michigan. Lansing, Michigan: Michigan Department of Education; June, 1972. (The fifth report of 1970-71 Michigan Educational Assessment Program).

Distribution of Educational Performance and Related Factors. Lansing, Michigan: Michigan Department of Education; June, 1972. (The sixth report of the 1970-71 Michigan Educational Assessment Program).

Educational Assessment and District Enrollment in Michigan. Lansing, Michigan: Michigan Department of Education; June, 1972. (The seventh report of the 1970-71 Michigan Educational Assessment Program).

Technical Report: Lansing, Michigan: Michigan Department of Education; June, 1972. (The ninth report of the 1970-71 Michigan Educational report of 1970-71 Michigan Educational Assessment Program).

1971-72 Assessment Publications

Published Reports

Objectives and Procedures of the Michigan Educational Assessment Program 1971-72. Lansing, Michigan: Michigan Department of Education; October, 1971 (The first report of the 1971-72 Michigan Educational Assessment Program).

Individual Pupil Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; April, 1972. (The second report of the 1971-72 Michigan Educational Assessment Program).

Local District and School Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; May, 1972. (The third report of the 1971-72 Michigan Educational Assessment Program).

Local District Results: Lansing, Michigan: Michigan Department of Edcuation; September, 1972. (The fourth report of the 1971-72 Michigan Educational Assessment Program).

Technical Report: Lansing, Michigan: Michigan Department of Education; November, 1972. (The fifth report of the 1971-72 Michigan Educational Assessment Program).

Related Publications

Test Analysis, Michigan Assessment of Basic Skills, Grade 4, Form UMT. Princeton: Educational Testing Service; April, 1972 (SR-72-22).

Test Analysis, Michigan Assessment of Basic Skills, Grade 7, Form UMT. Princeton: Educational Testing Service; April, 1972 (SR-72-21).

1971-72 Norm Tables: Norms listed are available for Grade 4 and Grade 7

Pupil Score Norms: State

School Mean Norms: State, plus 5 community types

District Mean Norms: State, plus 5 community types.

1972-73 Assessment Publications

Published Reports

Objectives and Procedures: Lansing, Michigan: Michigan Department of Education, October, 1972. (The first report of the 1972-73 Michigan Educational Assessment Program).

Individual Pupil Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; March, 1973. (The second report of the 1972-73 Michigan Educational Assessment Program).

Local District and School Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; March, 1973. (The third report of 1972-73 Michigan Educational Assessment Program).

Related Publications

Test Analysis, Michigan Assessment of Basic Skills, Grade 4, VMT. Princeton: Educational Testing Service; May, 1973 (SR-73-48).

Test Analysis, Michigan Assessment of Basic Skills, Grade 7, Form VMT. Princeton: Educational Testing Service; May, 1973 (SR-73-48).

1972-73 Norm Tables: Norms listed are available for Grade 4 and Grade 7

Pupil Score Norms: State

School Mean Norms: State, plus 5 community types

District Mean Norms: State, plus 5 community types

Additional Publications

Booklets and Papers

Research into the Correlates of School Performance: A Review and Summary of the Literature. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 3, 1970.

Staff Reply to the MAPEA Task Force Reports, (A July, 1972 Department staff paper replying to a report prepared by the Michigan Association of Professors of Educational Administration, Task Force on Educational Assessment and Accountability, April, 1972, Herbert C. Rudman, Chairman).

The Equating Report: Year-to-Year Analysis of the Cognitive Tests of the Michigan Educational Assessment Program 1970-72. Lansing, Michigan: Michigan Department of Education; March, 1973.